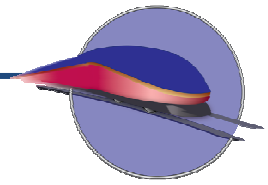
*Project Name:* *Date of Submission:* *Version Number:*

High-Speed Intercity Passenger Rail (HSIPR) Program



# Application Form

# Track 1a–Final Design (FD)/Construction & Track 4–FY 2009 Appropriations Projects

Welcome to the Track 1a Final Design (FD)/Construction and Track 4 Application for the Federal Railroad Administration's High-Speed Intercity Passenger Rail (HSIPR) Program. Applicants for Track 1a FD/Construction and/or Track 4 are required to submit this Application Form and Supporting Materials (forms and documents) as outlined in Section G of this application and in the HSIPR Guidance.

We appreciate your interest in the program and look forward to reviewing your application. If you have questions about the HSIPR program or this application, please contact us at HSIPR@dot.gov.

Instructions:

- Please complete the HSIPR Application electronically. See Section G for a complete list of the required application materials.
- In the space provided at the top of each section, please indicate the project name, date of submission (mm/dd/yy) and the application version number. The distinct Track 1a and/or Track 4 project name should be less than 40 characters and follow the following format: State abbreviation-route or corridor name-project title (e.g., HI-Fast Corridor-Track Work IV).
- For each question, enter the appropriate information in the designated gray box. If a question is not applicable to your FD/Construction Project, please indicate "N/A."
- Narrative questions should be answered concisely within the limitations indicated.
- Applicants must upload this completed application and all other application materials to www.GrantSolutions.gov by August 24, 2009 at 11:59pm EDT.
- Fiscal Year (FY) refers to the Federal Government's fiscal year (Oct. 1- Sept. 30).
- Please direct questions to: HSIPR@dot.gov

## A. Point of Contact and Applicant Information

| | | | | |
|---|---|---|---|---|
| **(1) Application Point of Contact (POC) Name:**<br>**Charlie Miller** | | **POC Title:**<br>**Rail Planning Coordinator** | | |
| **Street Address:**<br>VT Agency of Transportation<br>One National Life Drive | **City:**<br>**Montpelier** | **State:**<br>**VT** | **Zip Code:**<br>**05633-5001** | **Telephone Number:**<br>**802-828-5719** |
| **Fax: 802-828-2829** | | **Email: charlie.miller@state.vt.us** | | |

**(2) Name of lead State or organization applying** *(only States may apply for Track 4 )***:** Vermont Agency of Transportation (VTrans)

**(3) Name(s) of additional States and/or organizations applying in this group** *(if applicable)***:** N/A

**(4) Is this project for which you are applying for HSIPR funding related or linked to additional applications for HSIPR funding that may be submitted in this or subsequent rounds of funding?** ☒ Yes ☐ No ☐ Maybe

**If "yes" or "maybe," provide the following information:**

| Program/Project Name | Lead Applicant | Track | Total HSIPR Funding Proposed *(if known)* | Status of Application |
|---|---|---|---|---|
| Knowledge Corridor HSIPR | Massachusetts EOT | Track 1a - FD/Construction | $Unknown | Will Apply |
| Concord-Lebanon HSIPR | NHDOT | Track 3 | $Unknown | Will Apply |
| | | Track 1a - FD/Construction | $ | Applied |
| | | Track 1a - FD/Construction | $ | Applied |
| | | Track 1a - FD/Construction | $ | Applied |
| | | Track 1a - FD/Construction | $ | Applied |
| | | Track 1a - FD/Construction | $ | Applied |
| | | Track 1a - FD/Construction | $ | Applied |

*Project Name:* Vermonter/NECR Route Improvements *Date of Submission:* 8/24/09 *Version Number:* 1

# B. Project Overview

**(1) FD/Construction Project Name**: Vermonter/NECR Route Improvements

**(2) Indicate the Track under which you are applying: Track 1a - FD/Construction**
*Please note if you are applying for Track 1a–FD/Construction and Track 4 concurrently, you must submit **two separate versions** of this application into www.GrantSolutions.gov (one for Track 1a –FD/Construction and one for Track 4–FY 2009 Appropriations Projects).*

**(3) Indicate the activity(ies) for which you are applying** *(check both if applicable)*:
☒ Final Design ☒ Construction

**(4) What are the anticipated start and end dates for the FD/Construction Project?** *(mm/yyyy)*
**Start Date:** 12/2009 **End Date:** 02/2012

**(5) Total Cost of the FD/Construction Project** (year of expenditure (YOE) Dollars*): $ 57,936,547

**Please provide proposed inflation assumptions and methodology, if applicable in the space below.** *Please limit response to 1,000 characters.*

Anticipate purchase of a large percentage of the materials in the first year, thus inflation is a negligible factor.

**Of the total cost of the FD/Construction Project, how much would come from the FRA HSIPR Program:** (YOE Dollars**) $ 52,722,258

**Indicate percentage of total cost to be covered by matching funds** (cash and in-kind) 9 %
*Applications submitted under Track 4 require at least a 50 percent non-Federal match to be eligible for HSIPR funding.*

***** Year-of-Expenditure (YOE) dollars are inflated from the base year.
** This is the amount for which the applicant is applying.

**(6) Project Overview Narrative.** *Please limit response to 5,000 characters.*

Provide an overview of the main features and characteristics of the FD/Construction Project, including:

- The location of the project including name of rail line(s), State(s), and relevant jurisdiction(s) (include map if available in supporting documentation).
- Identification of service(s) that would benefit from the project, the stations that would be served, and the State(s) where the service operates.
- How the project was identified through a planning process and how the project is consistent with an overall plan for developing High-Speed Rail/Intercity Passenger Rail service.
- How the project will fulfill a specific purpose and need in a cost-effective manner.
- The project's independent utility.
- The specific improvements contemplated.
- Any use of railroad assets or rights-of-way, and potential use of public lands and property.
- Other rail services, such as commuter rail and freight rail that will make use of, or otherwise be affected by, the project.

The purpose of the Vermonter/NECR Rail Improvements project is to improve the conditions of the track, roadbed and bridges along the current route of the Amtrak Vermonter Service in Vermont and New Hampshire resulting in an increase track speed for a distance of 45 miles to 79 MPH and the remaining 145 miles from 55 MPH to 59 MPH. These improvements will reduce the operating schedule by up to 27 minutes and guarantees a more consistant, year round OTP by this train. The project was identified through the Vermont State Rail Policy Plan (2006), where the priority passenger rail recommendation is to preserve existing Amtrak service. Construction will take place over a two year period. The project is

planned for both the Roxbury (northern) subdivision and the Palmer (southern) subdivision of the NECR that currently carries the Amtrak/Vermonter Intercity Passenger Service. The northern project limit is milepost 132 (Roxbury Sub) and the Southern milepost is 110.5 (Palmer Sub). The 117-mile stretch of the NECR rail line from White River Junction north is a designated High Speed Rail Corridor. All construction activities will occur within the private right-of-way and assets owned by NECR.

Stations served by the Vermonter service include St. Albans, Essex Junction, Waterbury, Montpelier, Randolph, White River Junction, Ascutney, Claremont (NH), Bellows Falls, Brattleboro, and points south into Massachusetts, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, and the District of Columbia.

The independent utility of this project is incrementally achieved by the increased operating speeds, reliability, and reduction in temporary and permanent slow orders as the project proceeds.

NECR is headquartered in St. Albans, VT. It is a subsidiary of RailAmerica, Inc. The NECR consists of 330 miles of main track in VT, NH, MA, and CT. NECR connects/interchanges with 11 railroads, including class-I railroads such as Canadian National, CSX Transportation, as well as the Vermont Rail System. Within Vermont, NECR owns and operates 218 miles of main track stretching the length of the state from Brattleboro to East Alburg. NECR hosts two daily Amtrak trains per day (The Vermonter). These trains operate on the NECR railroad from Palmer, MA to St. Albans, VT, a distance of 237 miles.

The successful underlying freight operation of the NECR provides the necessary elements for a dependable, reliable intercity passenger rail service. NECR handled 38,791 loaded railcars in 2007, including over 10,000 loaded cars for in-state customers in Vermont. In addition, another 14,000 loaded cars passed through the state of Vermont enroute to their final destinations. The largest customers in Vermont are Burlington Electric at Burlington, Gas Supply at Montpelier, Cargill in Swanton, Barretts Trucking in White River Jct., and Irving Oil in White River Jct. St. Albans' Italy yard is the busiest freight yard in Vermont. For 2007 over 44,000 freight cars were handled in this yard. RailAmerica, Inc. employs 95 people in the state of Vermont. RailAmerica sustains substantial operations in St. Albans (general office/locomotive and car shop/MOW shop/accounting/dispatching), White River Jct. (office and yard), Essex (back up dispatch office and RR office),and Brattleboro (office and yard). RailAmerica's annual Vermont payroll in 2007 exceeded $4,000,000.

In 2007 the NECR spent $1,300,000 on capital work in Vermont. NECR surfaced 55 miles of track, inserted 11,000 new ties, upgraded our Essex office and St. Albans turntable. The normal capital budget for the entire NECR ranges between $4 and $7 million per year. In 2007 the NECR spent over $6.6 million dollars with Vermont based vendors for goods and services. These included track ballast, locomotive and vehicle fuel, lodging, contractors, and various utilities. The Bellows Falls Tunnel project was completed in the fall of 2007. This now allows the NECR to solicit both intermodal "double stack" container business as well as "auto rack" business. In 2008, NECR more than doubled its investment in this corridor.

**(7) Status of Activities: Are any FD or Construction activities that are part of this planned investment underway or completed?**

☐Yes (Final Design) ☐Yes (Construction) ☒No

**If "Yes," please describe the activities that are underway or completed in the table below.**[1] *If more than three activities, please detail in Section F of this application.*

[1] Please note: (a) requests for reimbursement of costs incurred prior to enactment of the relevant appropriations will not be considered and (b) supporting documentation for activities may also be required as noted in Appendix 2 of the HSIPR Guidance.

| Activity | Description | Completed? (If yes, check box) | Actual Initiation Date (mm/yyyy) | Actual or Anticipated Completion Date (mm/yyyy) |
|---|---|---|---|---|
| | | ☐ | | |
| | | ☐ | | |
| | | ☐ | | |

**(8) Describe the project service objectives** *(check all that apply):*

☐ Additional Service Frequencies
☒ Improved Service Quality
☒ Improved On-Time Performance on Existing Route
☒ Increased Average Speeds/Shorter Trip Times
☐ Other *(Please Describe):*

**(9) Types of capital investments contemplated** *(check all that apply):*

☒ Structures (bridges, tunnels, etc.)
☒ Track Rehabilitation
☒ New or restored sidings/passing tracks
☐ Major Interlockings
☐ Station(s)
☒ Communication, Signaling and Control
☐ Rolling Stock Refurbishments
☐ Rolling Stock Acquisition
☐ Support Facilities (Yards, Shops, Admin. Buildings)
☒ Grade Crossing Improvements
☐ Electric Traction
☐ Other *(Please Describe)*:

**(10) Right-of-Way-Ownership.** Provide information for all railroad right-of-way owners in the FD/Construction Project area. Where railroads currently share ownership, identify the primary owner. *If more than three owners, please detail in Section F of this application.*

| Type of Railroad | Railroad Right-of-Way Owner | Route Miles | Track Miles | Status of Agreements to Implement Projects |
|---|---|---|---|---|
| Regional or Sh | New England Central Railroad (RailAmerica, Inc.) | 190 | 190 | Master Agreement in Place |
| Amtrak | | | | Master Agreement in Place |
| Amtrak | | | | Master Agreement in Place |

**(11) Services.** Provide information for all existing rail services within project boundaries (freight, commuter, and intercity passenger). *If more than three services, please detail in Section F of this application.*

| Type of Service | Name of Operator | Top Speed Within Project Boundaries | | Number of Route-Miles Within Project Boundaries | Average Number of Daily One-Way Train Operations[2] within Project Boundaries | Notes |
|---|---|---|---|---|---|---|
| | | Passenger | Freight | | | |
| Freight | New England Central Railroad | | 40 | 190 | 6 | Project will increase efficiency with removal of long-term slow orders. |
| Intercity Pa | Amtrak | 55-59 | | 190 | 2 | Speeds will increase to a maximum of 79 mph. Trip time will be reduced by 27 minutes. |
| Freight | | | | | | |

**(12) Rolling Stock Type.** Describe the fleet of locomotives, cars, self-powered cars, and/or trainsets that would be intended to provide the service upon completion of the project. *Please limit response to 1,000 characters.*

Existing equipment will be used to provide the service. P-42 locomotives and 5 AM fleet cars

**(13) Intercity Passenger Rail Operator.** Provide the status of agreements with partners that will operate the benefiting high-speed rail/intercity passenger rail service(s) upon completion of the planned investment (e.g., Amtrak).
Name of Operating Partner: Amtrak
Status of Agreement: Final executed agreement on project scope/outcomes

**(14) Benefits to Other Types of Rail Service(s).** Are benefits to non-intercity-passenger rail services (e.g., commuter, freight) foreseen?
☒ Yes ☐ No
If "Yes", provide further details in Section E, Question 2.

[2] One daily round-trip train operation should be counted as two daily one-way train operations.

*Project Name:* Vermonter/NECR Route Improvements *Date of Submission:* 8/24/09 *Version Number:* 1

# C. Eligibility Information

**(1) Select applicant type, as defined in Appendix 1.1 of the HSIPR Guidance** *(only States may apply for Track 4)***:**

☒ State
☐ Amtrak

**If one of the following, please append appropriate documentation as described in Section 4.3.1 of the HSIPR Guidance:**

☐ Group of States
☐ Interstate Compact
☐ Public Agency established by one or more States
☐ Amtrak in cooperation with a State or States

**(2) Establish Completion of Preliminary Engineering.** In the space(s) below, please list the documents that establish completion of Preliminary Engineering for the project covered by this application. See HSIPR Guidance Appendix 2.2. If more than four references need to be listed, please place the additional information in Question F.

| Document Name | Completion Date (mm/yyyy) |
|---|---|
| NECR Project Estimate (version 6) | 08/2009 |
| | |
| | |
| | |

**(3) Establish Completion of NEPA Documentation (the date document was issued and how documentation can be verified by FRA).** The following are approved methods of NEPA verification (in order of FRA preference): 1) References to large EISs and EAs that FRA has previously issued, 2) Web link if NEPA document is posted to a website (including www.fra.gov), 3) Electronic copy of non-FRA documents attached with supporting documentation, or 4) a hard copy of non-FRA documents (large documents should not be scanned but should be submitted to FRA via an express delivery service). See HSIPR Guidance Section 1.6 and Appendix 3.2.9.

| Documentation | Date *(mm/yyyy)* | Describe How Documentation Can be Verified |
|---|---|---|
| ☒ Categorical Exclusion Documentation | 08/2009 | Attached (NECR FRA CE.pdf) |
| ☐ Final Environmental Assessment | | |
| ☐ Final Environmental Impact Statement | | |

**(4) Indicate if there is an environmental decision from FRA (date document was issued and web hyperlink if available).**

| Documentation | Date *(mm/yyyy)* | Hyperlink *(if available)* |
|---|---|---|
| ☐ Categorical Exclusion Determination | | |
| ☐ Finding of No Significant Impact | | |
| ☐ Record of Decision | | |

# D. Public Return on Investment

**(1) 1A. Transportation Benefits.** *See HSIPR Guidance Section 5.1.1.1. Please limit response to 8,000 characters:*

How is the project anticipated to improve Intercity Passenger Rail (IPR) service? Describe the overall transportation benefits, including information on the following *(please provide a level of detail appropriate to the type of investment):*

- IPR network development: Describe improvements to intermodal connections and access to stations as well as actual and potential expansions to the IPR network that may result from the project (including opportunities for interoperability with other services).
- IPR service performance improvements *(also provide specific metrics in table 1B below)*: Please describe service performance improvements directly related to the project, as well as a comparison with the existing service (*without project*). Describe relevant reliability improvements (e.g., increases in on-time performance, reduction in operating delays), reduced schedule trip times, increases in frequencies, aggregate travel time savings (resulting from reductions to both schedule time and delays, expressed in passenger-minutes), and other relevant performance improvements.
- IPR service results *(also provide specific metrics in table 1B below)*: Describe relevant outcomes of the service improvement such as increases in ridership, passenger-miles, and other results in comparison with the existing service (*without project*).
- Suggested supplementary information (*only when applicable*):
  - Transportation Safety: Describe overall safety improvements that are anticipated to result from the FD/Construction Project, including railroad and highway-rail grade crossing safety benefits, and benefits resulting from the shifting of travel from other modes to safer IPR service.
  - Cross-modal benefits from the FD/Construction Project, including benefits to:
    - ✓ Commuter Rail Services – Service improvements and results (applying the same approach as for IPR above).
    - ✓ Freight Rail Services – Service performance improvements (e.g., increases in reliability and capacity), results (e.g. increases in ton-miles or car-miles of the benefiting freight services), and/or other congestion, capacity or safety benefits.
    - ✓ Congestion Reduction/Alleviation in Other Modes; Delay or Avoidance of Planned Investments – Aviation and highway congestion reduction/alleviation, and/or other capacity or safety benefits. Describe any planned investments in other modes of transportation that may be avoided or delayed due to the improvement to IPR service that will result from the project.

IPR Network Development

While the project does not expand the reach of intercity passenger rail to previously un-served areas, it will accomplish the goal of making rail a more viable transportation mode for trips to areas served by Amtrak's Vermonter service. The reductions in travel time and delays, and the increased reliability of the service upon completion of the project, as discussed in the following paragraphs, will provide a stronger link between communities in Vermont, New Hampshire and Massachusetts with communities in Connecticut and New York, and beyond.

IPR Service Performance Improvements

Upgrades to this line will result in a marked improvement in on-time performance. Whereas on-time performance of the Vermonter service between East Northfield, Massachusetts and St. Albans, Vermont was around 38 percent in 2007, on-time performance is expected to improve to 90 percent upon completion of the project. The project will result in an average travel time savings of approximately twenty-seven (27) minutes on trips between St. Albans and East Northfield. The project will allow faster maximum travel speeds for passenger

and freight traffic, providing the capacity necessary to increase service frequency in the future.

Transportation Safety

As present, the annual probability of a train-vehicle accident along the study area of the New England Central railroad is 25.5 percent. This assumes the present at-grade crossing status before any improvements as reported by the Federal Railroad Administration. By adding gate improvements, and thereby upgrading various at-grade crossings from flashing lights to gates, the probability of an accident decreases to 17.7 percent. This is a 31 percent system improvement from the initial safety condition, or a reduction in the annual accident probability of 7.9 percentage points.

These calculations are derived using the U.S. Department of Transportation Accident Prediction Model (2007), and Accident Prediction and Resource Allocation Procedure Constraints (2007). Inputs for the model were obtained from the Federal Railroad Administration's Web Accident Prediction System. See "Safety Issues" section of the Project Management Plan.

Cross-Modal Benefits: Freight

The undertaking of this project will provide benefits to NECR freight operations, their customers and the overall economies of the four states this rail line serves. The project will upgrade the infrastructure to allow the NECR line, to accommodate 286,000 (286K) pound rail cars. Without 286K capability, the NECR is likely to lose much of its competitive advantage and customer base. In 2008, NECR lost 154 cars containing wood pulp, representing more than 14,000 tons. This specifically identified at-risk traffic represents approximately 15 percent of all NECR volume. In addition, it is likely that another similar volume of traffic that is not specifically identified will also be at risk, resulting in a net 30 percent reduction in traffic by 2030 that would otherwise be handled. Should these firms relocate out of Northern New England, there would be tremendous economic impacts. An upgrade to 286K would result in an 11.2 percent productivity improvement due to increased lading capacity, which will reduce the unit cost for NECR customers. Additionally, the project is expected to reduce freight travel time by one hour and increase reliability, which will help NECR retain current customers and attract new rail-dependent industries which require 286K service.

**1B. Operational and Ridership Benefits Metrics:** In the table(s) below, provide information on the anticipated transportation benefits and ridership changes projected to result from the project. Please do not include benefits and changes that would occur even if the project is not implemented (for example, as a result of population or economic growth factors).

| Project/Program Metric | Actual— FY 2008 levels | Projected Totals by Year (Actual Levels Plus Project-Caused Changes Only) | | |
|---|---|---|---|---|
| | | First Full Year After Project Completion | Fifth Full Year After Project Completion | "X" If N/A or Unsure |
| Annual passenger-trips | 75,900 | 79,900 | 89,928 | ☐ |
| Annual passenger-miles (millions) | 22,130,000 | 23,240,000 | 26,156,825 | ☐ |
| Annual IPR seat-miles offered (millions) | | | | ☒ |
| Average number of daily round train trip operations (typical weekday) | 1 | 1 | 1 | ☐ |
| On-time performance (OTP)[3] – percent of trains on time at endpoint terminals | 70.0% | 90.0% + | 90.0% + | ☐ |
| Average train operating delays: minutes of en-route delays per 10,000 train-miles[4] | | | | ☒ |
| Top operating speed (mph) | 59 | 79 | 79 | ☐ |
| Average scheduled operating speed (mph) (between endpoint terminals) | 47 | 53 | 53 | ☐ |

**(2) 2A. Economic Recovery Benefits.** *This section is required for Track 1a, and optional for Track 4. Please limit response to 4,000 characters. For more information, see Section 5.1.1.2 of the HSIPR Guidance.*

Describe the contribution the FD/Construction Project is intended to make towards economic recovery and reinvestment, including information on the following:

- How the project will result in the creation and preservation of jobs, including number of onsite and other direct jobs (on a 2,080 work-hour per year, full-time equivalent basis), and timeline for achieving the anticipated job creation.
- How the different phases of the project will affect job creation (consider the construction period vs. operating period)
- How the project will create or preserve jobs or new or expanded business opportunities for populations in Economically Distressed Areas (consider the construction period vs. operating period)
- How the project will result in increases in efficiency by promoting technological advances.
- How the project represents an investment that will generate long-term economic benefits (including the timeline for achieving economic benefits and describe how the project was identified as a solution to a wider economic challenge)
- If applicable, how the project will help to avoid reductions in State-provided essential services.

Direct Jobs
The proposed project will provide immediate, direct job opportunities for design and construction jobs as shown in Table 2-1. Detailed information about jobs by industry group is provided in the supplementary documentation for Economic

[3] As calculated and reported by Amtrak according to its existing procedures and definitions. An example can be found at page E-7 of the May 2009 Monthly Performance Report at http://www.amtrak.com/pdf/0905monthly.pdf. 'On-time' is defined as within the distance-based thresholds originally issued by the Interstate Commerce Commission, which are: 0 to 250 miles and all Acela trains—10 minutes; 251 to 350 miles—15 minutes; 351 to 450 miles—20 minutes; 451 to 550 miles—25 minutes; and 551 or more miles—30 minutes.

[4] As calculated by Amtrak according to its existing procedures and definitions. Useful background can be found at pages E-1 through E-6 of Amtrak's May, 2009 Monthly Performance Report at http://www.amtrak.com/pdf/0905monthly.pdf

Recovery Benefits.

Table 2-1 – Direct Jobs

| Direct Jobs | Number |
|---|---|
| Design | 50 |
| Construction | 360 |
| Total | 410 |

Additional local indirect and induced economic effects of construction expenditures will result in an additional 370 new jobs.

Construction versus Operations

Construction activity will increase total wages by $31.3 million and increase output and value added by $89.0 million and $40.3 million, respectively. On-going operations will result in a permanent increase of 835 jobs by the fifth year of operations (2016), increasing to 1380 jobs in 2030. These activities will result in additional output of $261.1 million and wages of $61.6 million for Vermont in 2030. By 2030, approximately $7.1 million in combined income, property and sales taxes will be generated in Vermont and $7.6 million in income and business taxes will accrue to the Federal government.

Economically Distressed Areas

The proposed project passes directly through six (6) cities or towns classified as EDAs and is adjacent to four others. Unemployment rates in these towns range between 7.1% and 11.3%. Construction employment, long-term operations and associated indirect employment will be accessible to workers from most of Vermont. This includes most of the 97 of the cities and towns designated as EDAs in Vermont. Construction and related jobs tend to offer high levels of pay and benefits to their employees, making these jobs of relatively high quality by local standards. Over 1,260 jobs otherwise lost will be saved by this project. These jobs are concentrated in agriculture, forestry products and wood processing – industries critically important to EDAs. The long-term effects of the project will result in an additional 481 manufacturing jobs.

Technology and Efficiency

Improved efficiency of rail operations will facilitate the use of more technologically advanced freight locomotives and significantly reduce emissions and improve air quality. The economic benefits associated with the introduction of new equipment and higher operating speeds will result in emissions reductions of 760 tons per year ($509,000 through 2030) through more consistent speeds across the line, and commensurate reductions in travel time and less frequent changes in speed that disproportionately consume fuel. The purchase of new locomotives will also provide benefits to those industries that supply and service them.

Long Term Economic Benefits

Expanded freight and passenger rail services are expected to provide long-term economic benefits for businesses and rail passengers. Freight operations will provide more productive logistics support for domestic rail-dependent industries by reducing delay, improving reliability, and prevent migration of transportation-sensitive industries from relocating elsewhere. International rail freight will be improved by providing faster and more reliable long-distance cross-border rail service. Improved passenger services will increase the number of passengers by reducing trip times and providing more seasonably reliable service. Expenditures by business and tourist-oriented passengers for services provided at major stations and terminals in Vermont will produce additional economic benefits for the State.

Table 2-2 shows the economic contribution of each of these factors has been assessed in terms of industrial output, wages and value added for the Vermont.

Table 2-2 – Long-Term Economic Benefits (2030)

| Economic Benefits | Value |
|---|---|
| Output (in millions) | $3,400 |
| Value Added (in millions) | $1,350 |
| Wages (in millions) | $950 |

Continued in Section F.

**2B. Job Creation:** Provide the following information about job creation through the life of the FD/Construction Project. Please consider construction, maintenance, and operations jobs.

| | FD/ Construction Period | First full Year of Operations | Fifth full Year of Operations |
|---|---|---|---|
| Anticipated number of annual onsite and other direct jobs created (on a 2080 work-hour per year, full-time equivalent basis) | 224 | 564 | 835 |

**(3) Environmental Benefits.** *Please limit response to 4,000 characters.*

How will the FD/Construction project improve environmental quality, energy efficiency, and reduction in the Nation's dependence on oil? Address project-caused changes in the following:

- Any projected reductions in key emissions (CO2, $O^3$, CO, PMx, and NOx) and their anticipated effects. Provide any available forecasts of emission reductions from a baseline of existing service for the first and fifth years of full operation *(provide supporting documentation if available).*
- Any expected energy and oil savings from traffic diversion from other modes and changes in the sources of energy for transportation. Provide any available information on changes from the baseline of the existing service for the first and fifth years of full operation (*provide supporting documentation if available*).
- Use of green methods and technologies. Address green building design, "Leadership in Environmental and Energy Design" building design standards, green manufacturing methods, energy efficient rail equipment, and/or other environmentally-friendly approaches.

The project will produce environmental benefits primarily through a reduction in freight emissions arising from steadier and somewhat higher operating speeds that result in an overall travel time reduction of one hour. The need to speed up and slow down for permanent and temporary slow orders will be greatly reduced, and with it, there will be a net annual reduction in 672 metric tons of CO2, along with other corresponding smaller reductions in other diesel pollutants. As noted in Section 2 above, these figures assume the adoption of modern EPA Tier II compliant locomotives, and do not take into account the additional fuel efficiency benefits that will arise from upgrading from NECR's current older fleet to a modern fleet.

Some additional emissions benefits will accrue to the Amtrak service as well, and for the same reasons, as fewer changes in speeds will be required following completion of the improvements. However, these were not quantified, and are likely to be substantially smaller than for the freight services.

Gains in emissions from diversion of passengers from alternative modes to rail were not quantified. At inception, these are likely to be modest, but if the service frequency is expanded, emissions reductions from diversion are likely to be far more substantial.

**(4) Livable Communities Project Benefits Narrative.** (*For more information, see Section 5.1.1.3 of the HSIPR Guidance, Livable Communities).* *Please limit response to 3,000 characters.*

How will the FD/Construction Project foster Livable Communities? Address the following:

- Integration with existing high density, livable development: Provide specific examples, such as (a) central business districts with walking/biking and (b) public transportation distribution networks with transit-oriented development.
- Development of intermodal stations: Describe such features as direct transfers to other modes (both intercity passenger transport and local transit).

Livable communities are based on development patterns that accommodate a range of transportation options. Neighborhoods that are designed with a mix of employment, housing and retail within walking distance of rail and transit stations can increase the number of trips made by transit, bicycle, and on foot, thereby reducing single occupant auto trips. Many communities along the Vermonter route exemplify these attributes. White River Junction and Rockingham are two examples. The existing rail stations (where Amtrak currently provides rail service) are located in the central business district with seamless connections to public transportation and intercity bus transportation. Approximately 50 local public transit bus routes operate along the Vermonter rail route.

*Project Name:* Vermonter/NECR Route Improvements *Date of Submission:* 8/24/09 *Version Number:* 1

# E. Project Success Factors

**(1) Project Management Approach and Applicant Qualifications Narrative:** *Please provide separate responses to each of the following. Additional information on project management is provided in Section 5.1.2.1 of the HSIPR Guidance, Project Management.*

**1A. Applicant qualifications.** *Please limit response to 2,000 characters.*

Management experience: Does the applicant have experience in managing rail investment projects and managing projects of a similar size and scope to the one proposed in this application?

☒ Yes - Briefly describe experience (brief project(s) overview, dates)

☐ No- Briefly describe expected plan to build technical and managerial capacity; provide reference to Project Management Plan.

VTrans has a history managing large and complex rail projects, including the following examples:
- Western Corridor (completed), 2005-08, track, roadbed and bridges, $7.2 million
- Western Corridor (programmed), track, roadbed and bridges, $23 million
- ABRB, 2002, track, roadbed and bridges, $16 million
- Burlington Tunnel, 2008, $1.2 million
- Bellows Falls Tunnel, 2007, $2.8 million

**1B. Describe the organizational approach for the different project stages included in this application (final design, construction), including the roles of staff, contractors and project stakeholders in implementing the project. For construction activities, provide relevant information on work forces, including railroad contractors and grantee contractors.** *Please limit response to 2,000 characters.*

See the Project Management Plan and the Financial Plan (submitted as an attachment to this application).

**1C. Does the FD/Construction Project require approval by FRA of a waiver petition from a Federal railroad safety regulation? (Reference to, or discussion of, potential waiver petitions will not affect FRA's handling or disposition of such waiver petitions.)**

☐ YES- If yes, explain and provide a timeline for obtaining the waivers

☒ NO

*Please limit response to 1,500 characters.*

**1D. Provide a preliminary self-assessment of project uncertainties and mitigation strategies (consider funding risk, schedule and budget risk and stakeholder risk). Describe any areas in which the applicant could use technical assistance, best practices, advice or support from others, including FRA.** *Please limit response to 2,000 characters.*

See the "Risk Management" section of the Project Management Plan (submitted as an attachment to this application).

**(2) Stakeholder Agreements Narratives**. *Additional information on Stakeholder Agreements is provided in Section 5.1.2.2 of the HSIPR Guidance.*

Under each of the following categories, describe the applicant's progress in developing requisite agreements with key stakeholders. In addition to describing the current status of any such agreements, address the applicant's experience in framing and implementing similar agreements, as well as the specific topics pertaining to each category.

**2A. Ownership Agreements** – Describe how agreements will be finalized with railroad infrastructure owners listed in the "Right-of-Way Ownership" and "Service Description" tables in Section B. If appropriate, "owner(s)" may also include operator(s) under trackage rights or lease agreements. Describe how the parties will agree on project design and scope, project benefits, project implementation, use of project property, project maintenance, scheduling, dispatching and operating slots, project ownership and disposition, statutory conditions and other essential topics. Summarize the status

and substance of any ongoing or completed agreements. *Please limit response to 2,000 characters.*

The Agency of Transportation and the NECR Railroad have signed a Memorandum of Understanding. See the Memorandum of Understanding (submitted as an attachment to this application).

**2B. Operating Agreements** – Describe the status and contents of agreements with the intended operator(s) listed in "Services" table in the Project Overview section above. Address project benefits, operation and financial conditions, statutory conditions, and other relevant topics. *Please limit response to 2,000 characters.*

The 1995 Amtrak and NECR operating agreement is currently in effect with on-going negotiations for a renewal. The State of Vermont and Amtrak operating agreement for services is prepared on a Federal fiscal year. The current agreement expires September 30, 2009.

**2C. Selection of Operator –** This question applies to Track 1a only. If the proposed operator railroad was not selected competitively, please provide a justification for its selection, including why the selected operator is most qualified, taking into account cost and other quantitative and qualitative factors, and why the selection of the proposed operator will not needlessly increase the cost of the project or of the operations that it enables or improves. *Please limit response to 1,000 characters.*

This is a public-private partnership with the NECR. The Amtrak Vermonter is a state-supported service north of Springfield, Massachusetts. The State is responsible for all direct costs associated with that agreement.

**2D. Other Stakeholder Agreements** – Provide relevant information on other stakeholder agreements including State and local governments. *Please limit response to 2,000 characters.*

N/A

**2E. Agreements with operators of other types of rail service** – Describe any cost sharing agreements with operators of non-intercity passenger rail service (e.g., commuter, freight). *Please limit response to 2,000 characters.*

N/A. The railroad owner also operates freight services.

**(3) Financial Information.**

**3A. Capital Funding Sources**. Please provide the following information about your funding sources (if applicable).

| Non FRA Funding Sources | New or Existing Funding Source? | Status of Funding[5] | Type of Funds | Dollar Amount (YOE Dollars) | % of Project Cost | Describe Uploaded Supporting Documentation to Help FRA Verify Funding Source |
|---|---|---|---|---|---|---|
| NECR | New | Committed | | $5,203,740 | 9 | See M.O.U. and the Financial Plan |
| | New | Committed | | | | |
| | New | Committed | | | | |

[5] Reference Notes: The following categories and definitions are applied to funding sources:
**Committed:** Committed sources are programmed capital funds that have all the necessary approvals (e.g. legislative referendum) to be used to fund the proposed project/program without any additional action. These capital funds have been formally programmed in the State Rail Plan and/or any related local, regional, or State Capital Investment Program CIP or appropriation. Examples include dedicated or approved tax revenues, State capital grants that have been approved by all required legislative bodies, cash reserves that have been dedicated to the proposed project/program, and additional debt capacity that requires no further approvals and has been dedicated by the sponsoring agency to the proposed project/program.
**Budgeted**: This category is for funds that have been budgeted and/or programmed for use on the proposed project but remain uncommitted, i.e., the funds have not yet received statutory approval. Examples include debt financing in an agency-adopted CIP that has yet to be committed in their near future. Funds will be classified as budgeted where available funding cannot be committed until the grant is executed, or due to the local practices outside of the project sponsor's control (e.g., the project development schedule extends beyond the State Rail Program period).
**Planned:** This category is for funds that are identified and have a reasonable chance of being committed, but are neither committed nor budgeted. Examples include proposed sources that require a scheduled referendum, requests for State/local capital grants, and proposed debt financing that has not yet been adopted in the agency's CIP.

**3B. Capital Investment Financial Agreements:** Describe any cost sharing contribution the applicant intends to make towards the FD/Construction Project, including its source, level of commitment, and agreement to cover cost increases or financial shortfalls. Describe the status and nature of any agreements between funding stakeholders that would provide for the applicant's proposed match, including the responsibilities and guarantees undertaken by the parties. Provide a brief description of any in-kind matches that are expected. *Please limit response to 2,000 characters.*

The railroad is participating in a public-private partnership with an involvement of 10 percent of the construction cost through the Agency of Transportation, and contingencies have been built into the project budget.

**3C. Operating Financial Plan:** Does the applicant expect that the State operating subsidy requirements for the benefiting intercity passenger rail service will significantly increase, **as a result of the project**, during the first five years after project completion? ☐ Yes ☒ No

If "Yes," please complete the table below (in YOE dollars) and answer the following questions. *Please limit response to 2,000 characters.*

(a) How did you project future State operating subsidies for the benefiting service(s); and

(b) What are the source, nature, and likelihood of the funding that will enable the State to finance the projected increases in annual operating subsidies due to the project?

| Subsidy | Actual— FY 2009 levels (YOE Dollars) | Projected Totals by Year (Actual Levels Plus Project Caused Changes Only) (YOE Dollars) | |
|---|---|---|---|
| | | First Full Year After Project Completion | Fifth Full Year After Project Completion |
| State operating subsidy (total for all benefiting services) | | | |

**(4) Financial Management Capacity and Capability** – Provide audit results and describe applicant capability to absorb potential cost overruns, financial shortfalls, or financial responsibility for potential disposition requirements (include as supporting documentation as needed). Provide statutory references/ legal authority to build and oversee a rail capital investment. *Please limit response to 2,000 characters.*

See the Financial Plan and the Project Management Plan (submitted as attachments to this application).

**(5) Timeliness of Project Completion –** Provide the following information on the dates and duration of key activities, if applicable. *For more information, see Section 5.1.3.1 of the HSIPR Guidance, Timeliness of Project Completion.*

| | |
|---|---|
| Final Design Duration: | 2 months |
| Construction Duration: | 24 months |
| Rolling Stock Acquisition Duration: | 0 months |
| Rolling Stock Testing Duration: | 0 months |
| Service Operations Start date: | 01/2012 *(mm/yyyy)* |

**(6) If applicable, describe how the project will promote domestic manufacturing, supply and other industries, including United States-based equipment manufacturing and supply industries**. *Please limit response to 1,500 characters.*

See the "Buy America" provisions (submitted as an attachment to this application).

**(7) If applicable, describe how the project will help develop US professional railroad engineering, operating, planning and management capacity needed for sustainable HSR/IPR development in the United States, including promotion of a diverse workforce.** *Please limit response to 1,500 characters.*

The project will build technical and managerial capacity within the operating railroad, Amtrak, and other engineering departments, and the Agency of Transportation, increasing the supply of the nation's railroad professionals.

*Project Name:* Vermonter/NECR Route Improvements *Date of Submission:* 8/24/09 *Version Number:* 1

# F. Additional Information

**(1) Please provide any additional information, comments, or clarifications and indicate the section and question number that you are addressing** (e.g., Section E, Question 1B). *This section is optional.*

*Continued from Section D, Question 2A*

*Additional economic benefits are anticipated as long-term economic benefits increase the number of business opportunities in the counties directly and indirectly affected by the project. Based on the anticipated economic activity, 315 new or expanded business opportunities in a variety on sectors are expected. These include business and professional services, tourism and trade, and government and educational services.*

*State-Provided Essential Services*

*Additional state income taxes attributable to new employment and sales taxes on the purchase of supplies and materials will generate significant tax revenues for Vermont. These are estimated as follows:*

*Table 2-3 – Estimated Tax Revenues*

| *Source* | *Estimated Revenues (in millions)* |
|---|---|
| *Income* | *$1.288* |
| *Sales* | *$0* |
| *Supplies and Materials* | *$1.165* |
| *Purchases by Households* | *$0.493* |
| *Property* | *$2.620* |
| *Other* | *$1.562* |
| *Total* | *$7.128* |

*These revenues will provide the State with funds to support a number of essential social, health, educational and employment services critical to economic recovery*

*Statement related to employment figures presented in Section D, Question 2.B:*

*The employment figures represent jobs directly related to the proposed rail infrastructure. This includes jobs retained because of the investments, and jobs related to improvements in reliability for freight and improved travel time for passengers. See "Economic Impact Analysis Supporting Documentation," (attached) for the employment methodology.*

*Project Name:* Vermonter/NECR Route Improvements *Date of Submission:* 8/24/09 *Version Number:* 1

# G. Summary of Supporting Materials

| Application Form | Required | Optional | Reference | Description | Format |
|---|---|---|---|---|---|
| ☒ This Application Form | ✓ | | HSIPR Guidance Section 4.3.3.3 | This document to be submitted through *GrantSolutions.* | Form |
| **Supporting Forms** | **Required** | **Optional** | **Reference** | **Description** | **Format** |
| ☒ General Info. | ✓ | | HSIPR Guidance Section 4.3.5 | This document to be submitted through *GrantSolutions.* | Form |
| ☒ Detailed Capital Cost Budget | ✓ | | HSIPR Guidance Section 4.3.5 | This document to be submitted through *GrantSolutions.* | Form |
| ☒ Annual Capital Cost Budget | ✓ | | HSIPR Guidance Section 4.3.5 | This document to be submitted through *GrantSolutions.* | Form |
| ☒ Project Schedule | ✓ | | HSIPR Guidance Section 4.3.5 | This document to be submitted through *GrantSolutions.* | Form |
| **Supporting Documents** | **Required** | **Optional** | **Reference** | **Description** | **Format** |
| ☐ Map of the Planned Investment | | ✓ | Application Question B.6 | Map of the Planned Investment location. Please upload into *GrantSolutions.* | None |
| **Standard Forms** | **Required** | **Optional** | **Reference** | **Description** | **Format** |
| ☒ SF 424: Application for Federal Assistance | ✓ | | HSIPR Guidance Section 4.3.3.3 | Please submit through *GrantSolutions* | Form |

| | | | | | |
|---|---|---|---|---|---|
| ☒ SF 424C: Budget Information-Construction | ✓ | | HSIPR Guidance Section 4.3.3.3 | Please submit through *GrantSolutions* | Form |
| ☒ SF 424D: Assurance Construction | ✓ | | HSIPR Guidance Section 4.3.3.3 | Please submit through *GrantSolutions* | Form |
| ☒ FRA Assurances Document | ✓ | | HSIPR Guidance Section 4.3.3.3 | May be obtained from FRA's website at http://www.fra.dot.gov/downloads/admin/assurancesandcertifications.pdf. The document should be signed by an authorized certifying official for the applicant. Submit through *GrantSolutions.* | Form |

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